

Title (en)

Identification and use of molecules implicated in pain

Title (de)

Identifizierung und Verwendung von Molekülen, welche mit Schmerz in Verbindung stehen

Title (fr)

Identification et utilisation des molécules impliquées dans la douleur

Publication

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Application

EP 02255228 A 20020726

Priority

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Abstract (en)

[origin: EP1284297A2] The invention relates to the use of: (a) an isolated gene sequence that is down-regulated in the spinal cord in response to streptozocin-induced diabetes; (b) an isolated gene sequence comprising a nucleic acid sequence of Tables I to X. (c) an isolated gene sequence having at least 80% sequence identity with a nucleic acid sequence of Tables I to X; (d) an isolated nucleic acid sequence that is hybridizable to any of the gene sequences according to (a), (b) or (c) under stringent hybridisation conditions; (e) a recombinant vector comprising a gene sequence or nucleic acid sequence according to any one of (a) to (d); (f) a host cell containing the vector according to (e); (g) a non-human animal having in its genome an introduced gene sequence or nucleic acid sequence or a removed or down-regulated gene sequence or nucleic acid sequence according to any one of (a) to (d); (h) an isolated polypeptide comprising an amino acid sequence at least 90% identical to an amino acid sequence encoded by a nucleotide sequence according to any one of (a) to (d), or a polypeptide variant thereof with sequential amino acid deletions from the C terminus and/or the N-terminus; or (i) an isolated polypeptide encoded by a nucleotide sequence according to any one of (a) to (d); or (k) an isolated antibody that binds specifically to a polypeptide according to (h) or (i); in the screening of compounds for the treatment of pain, or for the diagnosis of pain. The invention also relates to the use of naturally occurring compounds such as peptide ligands of the expression products of the above gene sequences and their associated signal transduction pathways for use in the treatment of pain.

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Citation (search report)

- [AD] WO 0063427 A2 20001026 - DEVGEN NV [BE], et al
- [X] BITAR MILAD S ET AL: "Attenuation of IGF-1 antinociceptive action and a reduction in spinal cord gene expression of its receptor in experimental diabetes", PAIN, vol. 75, no. 1, March 1998 (1998-03-01), pages 69 - 74, XP002262337, ISSN: 0304-3959
- [X] WUARIN LAURA ET AL: "Brain insulin-like growth factor-II mRNA content is reduced in insulin-dependent and non-insulin-dependent diabetes mellitus", JOURNAL OF NEUROCHEMISTRY, vol. 67, no. 2, 1996, pages 742 - 751, XP002262338, ISSN: 0022-3042
- [X] BITAR MILAD S ET AL: "Diabetes attenuates the response of the lumbospatial noradrenergic system to idazoxan", PHARMACOLOGY BIOCHEMISTRY AND BEHAVIOR, vol. 67, no. 2, October 2000 (2000-10-01), pages 247 - 255, XP002262339, ISSN: 0091-3057
- [A] COURTEIX C ET AL: "Streptozocin-induced diabetic rats: Behavioural evidence for a model of chronic pain", PAIN, vol. 53, no. 1, 1993, pages 81 - 88, XP009020332, ISSN: 0304-3959
- [A] FOX ALYSON ET AL: "Critical evaluation of the streptozotocin model of painful diabetic neuropathy in the rat", PAIN, vol. 81, no. 3, June 1999 (1999-06-01), pages 307 - 316, XP002260439, ISSN: 0304-3959
- [A] NAKAMURA JIRO ET AL: "A protein kinase C-beta-selective inhibitor ameliorates neural dysfunction in streptozotocin-induced diabetic rats", DIABETES, vol. 48, no. 10, October 1999 (1999-10-01), pages 2090 - 2095, XP002260473, ISSN: 0012-1797
- [A] TAO Y-X ET AL: "Expression and action of cyclic GMP-dependent protein kinase Ialpha in inflammatory hyperalgesia in rat spinal cord", NEUROSCIENCE, vol. 95, no. 2, 1 December 2000 (2000-12-01), pages 525 - 533, XP002260437, ISSN: 0306-4522
- [AD] MALMBERG ANNICKA B ET AL: "Preserved acute pain and reduced neuropathic pain in mice lacking PKC-gamma", SCIENCE (WASHINGTON D C), vol. 278, no. 5336, 1997, pages 279 - 283, XP002260438, ISSN: 0036-8075

Cited by

EP2293079A3; US8013123B2; WO02083900A3; WO2005114222A1; WO2016193714A1

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